KIRKDALE ARCHAEOLOGY 1996 - 1997

by Philip Rahtz and Lorna Watts

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Cover illustration is the fragment of filigree glass rod of 9th century date from Trench II

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Introduction

The archaeological research project at Kirkdale was introduced in a supplement *(Archaeology at Kirkdale,* hereafter *AAK)*[1] to the last *Historian*. This monograph enjoyed a wide circulation, including the congregation of St Gregory's Minster. This paper is an update of that, a summary of work done in 1996 - 7, since the last *Historian* was published. We are now reasonably convinced that Kirkdale was the site of an early Anglo-Saxon monastery; it may safely take its place alongside the great Christian centres of the north-east mentioned by Bede (fig 1).

Excavation in the North Field

In the field north of the church (AAK, fig 3; for location see fig 23 below) Trench II (AAK,16) has now been completed. Three principal phases were defined here. The first was a cemetery, of which 14 graves were located in the lowest levels (fig 2). The skeletons were of men, women and children, showing this was a burial ground of secular as well as ecclesiastical people; they probably date from the 8th-9th centuries AD.

The second phase was of industrial or craft activity; this was associated with postholes of a major timber structure and areas of gravel metalling and dark soil (fig 3). Finds from this phase include metal-working residues, burnt limestone, charcoal and burnt clay. Dr Gerry McDonnell, of the University of Bradford, has examined the metal-working residues[2]. He reports that a crucible fragment indicates copper alloy working; zinc was present in this (determined by X-ray Fluorescence), and also in the glaze on two stone fragments. The ferrous slags were from both smelting iron (the ore being available on the Moors) and also smithing; there are pieces of vitrified hearth or furnace bases, which can result from either process. He concludes that iron was being smelted in the vicinity of the monastery, probably associated with building construction rather than with

1. Lorna Watts, Jane Grenville and Philip Rahtz, *Archaeology at Kirkdale,* Supplement to *The Ryedale Historian* no. 18 (1996-1997); ISSN 1362-5373.

2. A full technical report will be published elsewhere.

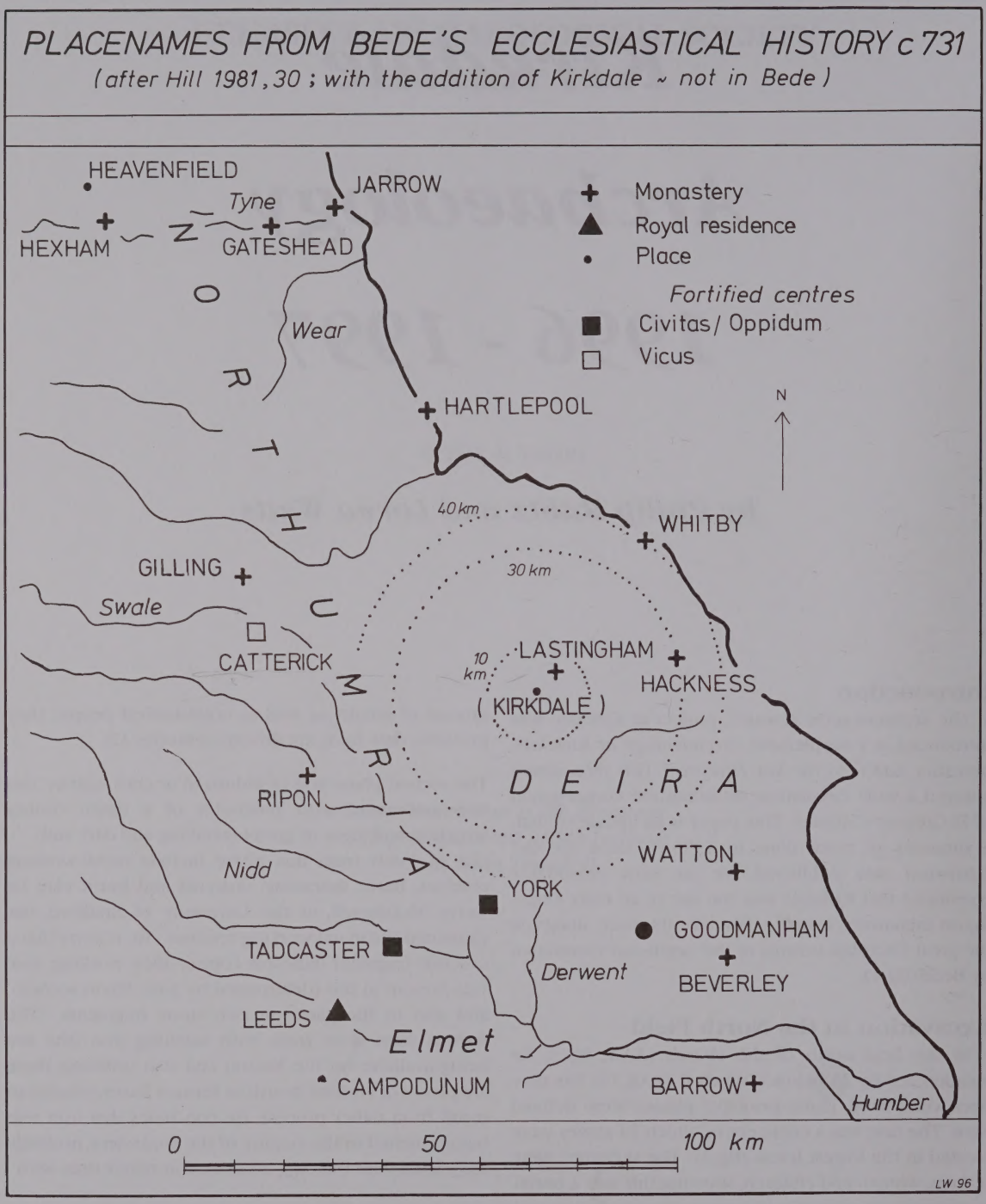

Fig 1 - Placenames from Bede's Ecclesiastical History

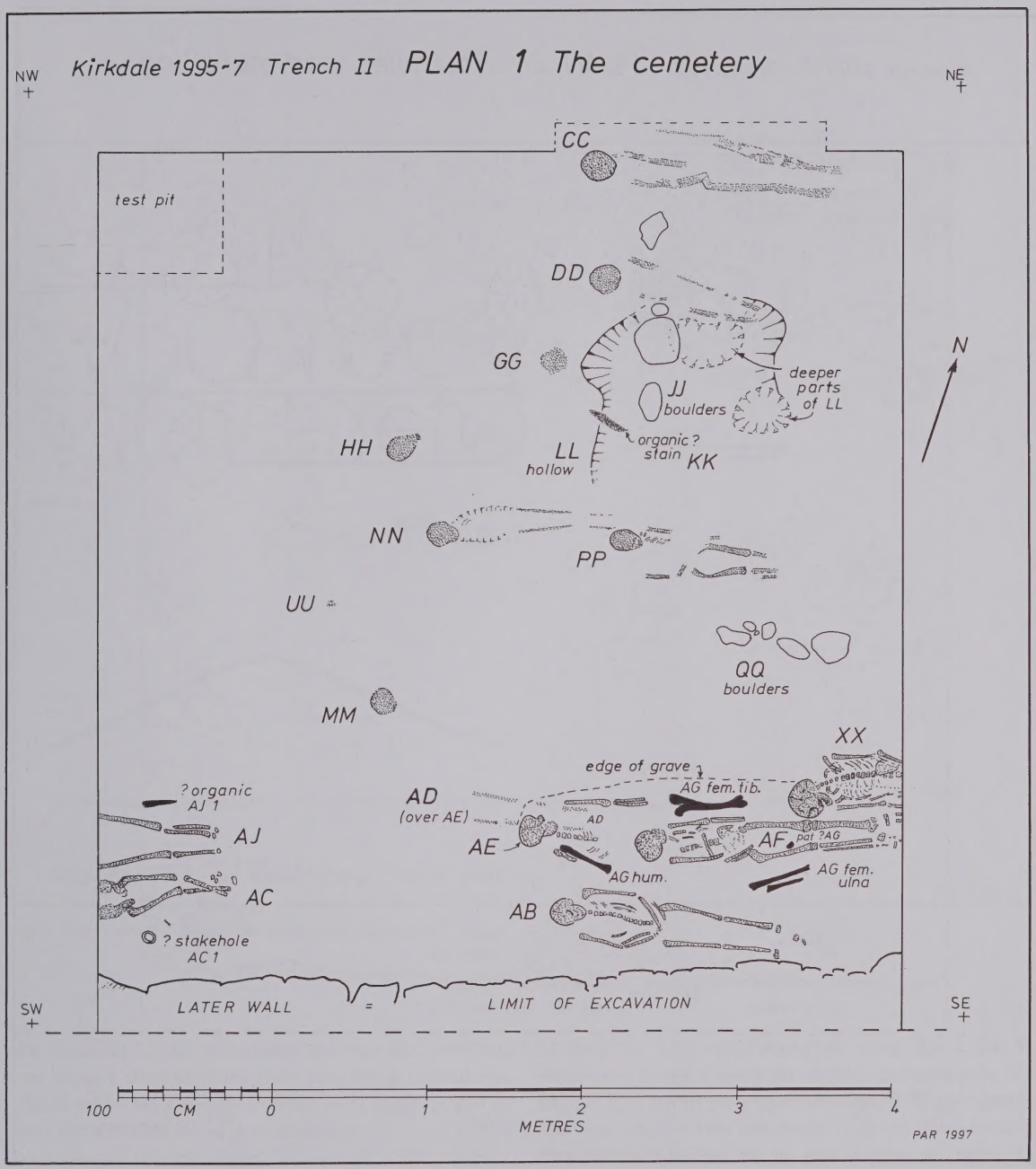

Fig 2 - Trench II, Plan 1, the cemetery

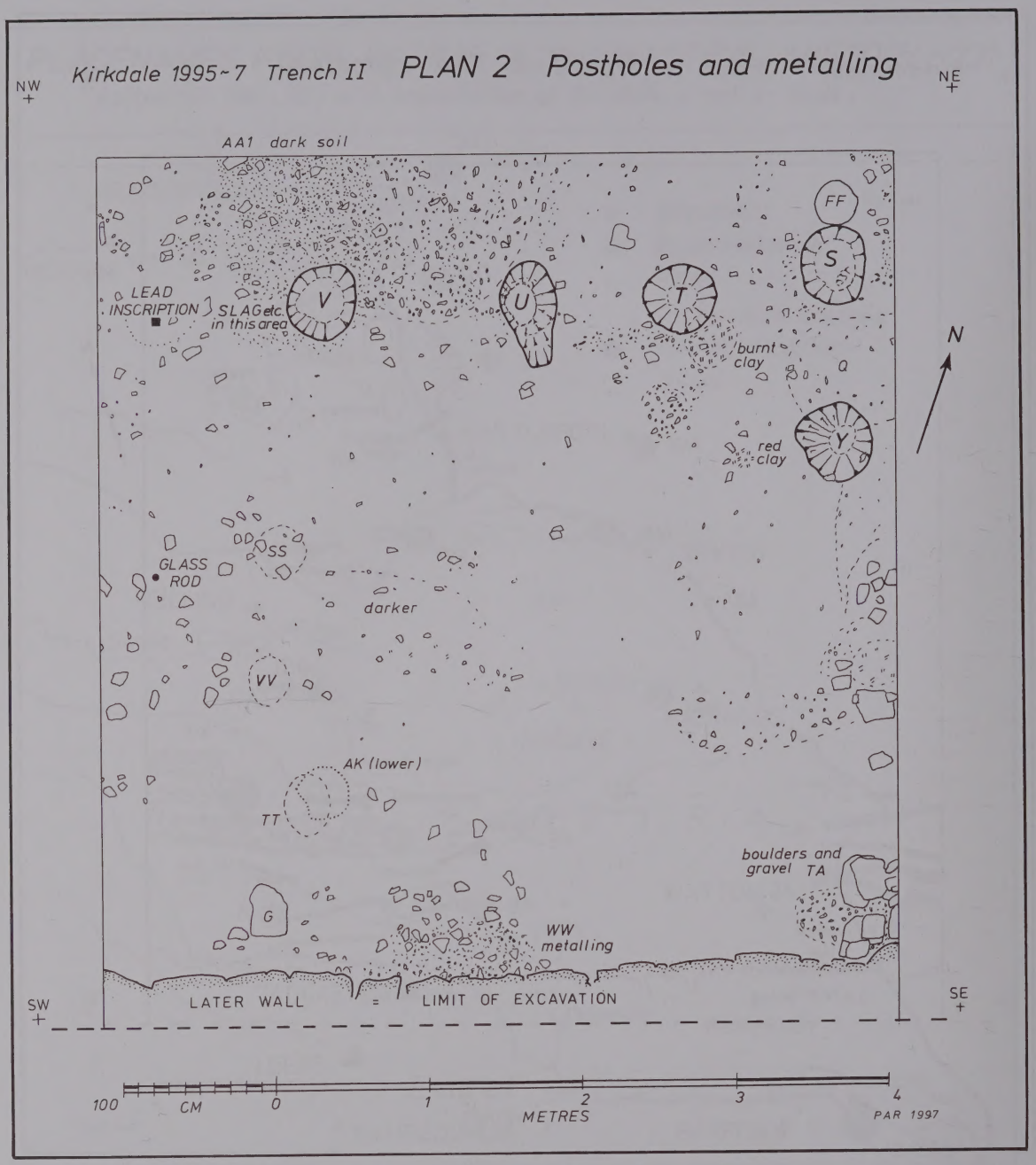

Fig 3 - Trench II, Plan 2, postholes and metalling

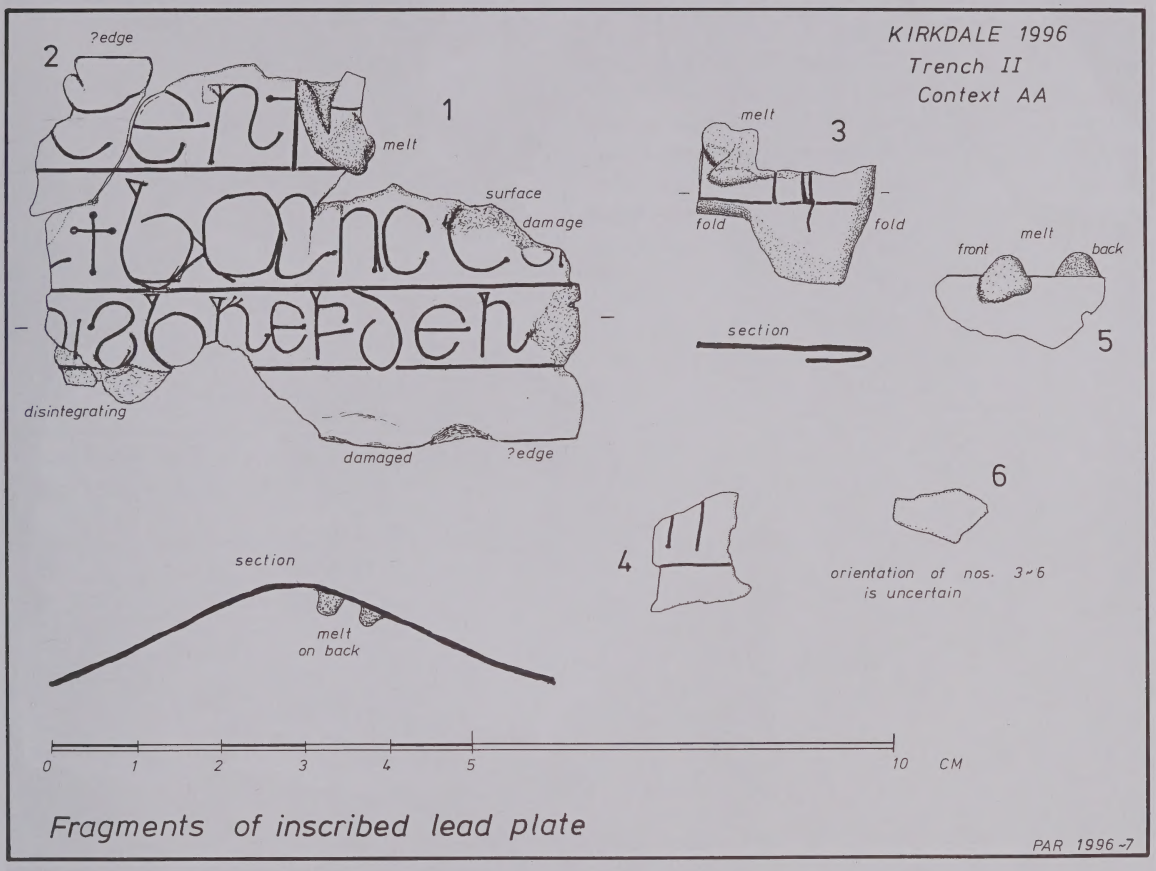

Fig 4 - The inscriptions on the lead plate fragments

the economy of the monastery; and that iron smithing and copper alloy working were also being carried out, which could be associated either with construction or with the working life of the monastery.

In these levels were some sherds of middle or late Saxon pottery, and two exceptionally important finds. The first of these was a group of lead plate scrap (figs 4 and 5); Fragments 1 and 2 carry an incised inscription in Old English half-uncial script, of 24 characters, arranged in four zones, the lowest one blank. They are the subject of extensive discussion in an article now in press by ourselves and three other authors for *Medieval Archaeology,* looking at the plate from several different aspects : archaeological, palaeographic, epigraphic, literary and historical. The characters read:

: t e r (cross spacer)
? (cross spacer) **b a n c** ??
(spacer/stop) **s b r e f d e r**

Fig 5 - Principal fragments of inscribed lead plate

There is general agreement that **b a n c** in the second line refers to a *bone chest*, the plate being attached to a reliquary, ossuary, or chest; in which the bones of one or more important people were kept. There is strong support for **b r e f d e** meaning 'he/she wrote'- a maker's name preceding this. The letter forms are dated to the 8th or 9th century (or possibly early 10th). The only other example in Britain of such an identification plate is at Flixborough in Humberside.

The second remarkable find was a tiny fragment of glass rod (cover and fig 6) with spiral trails of opaque white

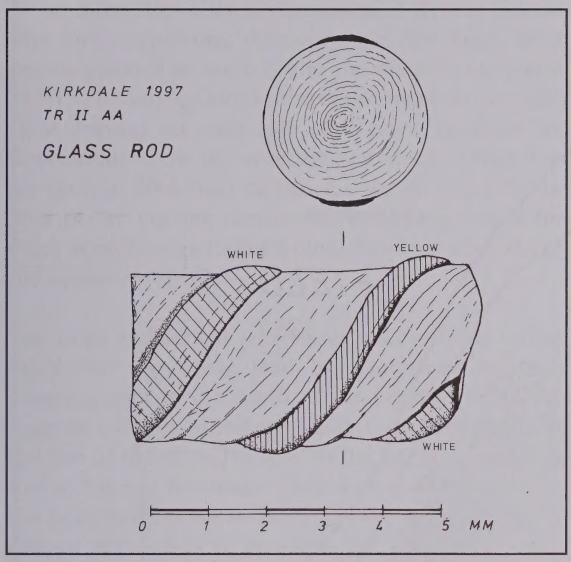

Fig 6 - Fragment of glass rod

and yellow. Such rods have been found in England only at Barking Abbey, and at Dunmisk in Co Tyrone in Ireland (fig 7). The closest parallels (in these colours) come from the great Carolingian (early 9th century) monastery at San Vincenzo, in southern central Italy, where they were being manufactured in quantity. There the glass rods were used for decorating glass vessels, notably lamps used in a Christian context. Similar rods were found at Kaupang, a big trading port in Norway. We do not know yet if the Kirkdale fragment is an import from Italy (though this will be possible to determine by scientific analysis) or made at some other centre in NW Europe, or even in Britain. It does put Kirkdale directly in the orbit of the great routes of trade, gift and exchange extending from the central Mediterranean to Scandinavia and Ireland in the 7th-10th centuries AD (fig 7). There were of course numerous journeys made from England to Rome, notably by bishops, abbots and kings, as described by Bede.

These two finds, and to a lesser extent the evidence of craft-working, do much to strengthen the concept of Kirkdale being a pre-Conquest monastery.

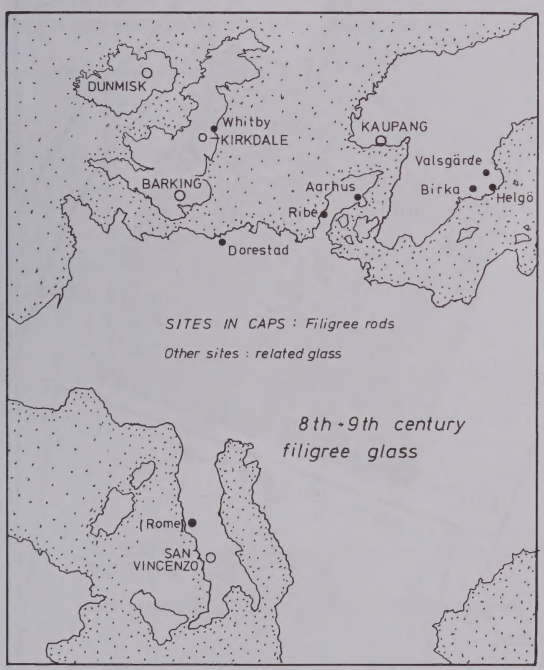

Fig 7 - Map of 8th - 9th century filigree glass finds

The third phase in Trench II was the separation of the field from the churchyard by a stone wall, and the development of the headland of a ridge and furrow system of arable cultivation; associated pottery suggests that this major landscape change was part of Orm Gamalson's proprietorial re-organisation (AAK,7).

It is now clear that the north field has a major potential for the understanding of the outer part of an Anglo-Saxon monastery. In AAK (fig 3) we included the outlines of possible features and alignments indicated by geophysical survey. In fig 8 we show the detail on which Tony Pacitto's survey was based. This has high relevance to the archaeological and metallographic evidence for industrial and craft activity in Trench II, at the southern extremity of the geophysical survey.

The full technical detail on which this is based will be published elsewhere, but Tony Pacitto has provided the following summary:

'The 1995 magnetic survey[3] covered about 0.8 ha of the valley floor (Field C). In this flood-plain the subsoil is alluvial, differing little from the topsoil; this results in a low magnetic contrast. The area is now permanent pasture, but the ridge and furrow shows that it was formerly arable. Many of the anomalies shown are doubtless modern ferrous rubbish, after 50 years of scout camping (especially the NE part of the field), and agricultural and military (1939-45) activity, or sextons' rubbish (in the area nearer to the churchyard wall).

3. Data-logger and computer programme by K Mayes.

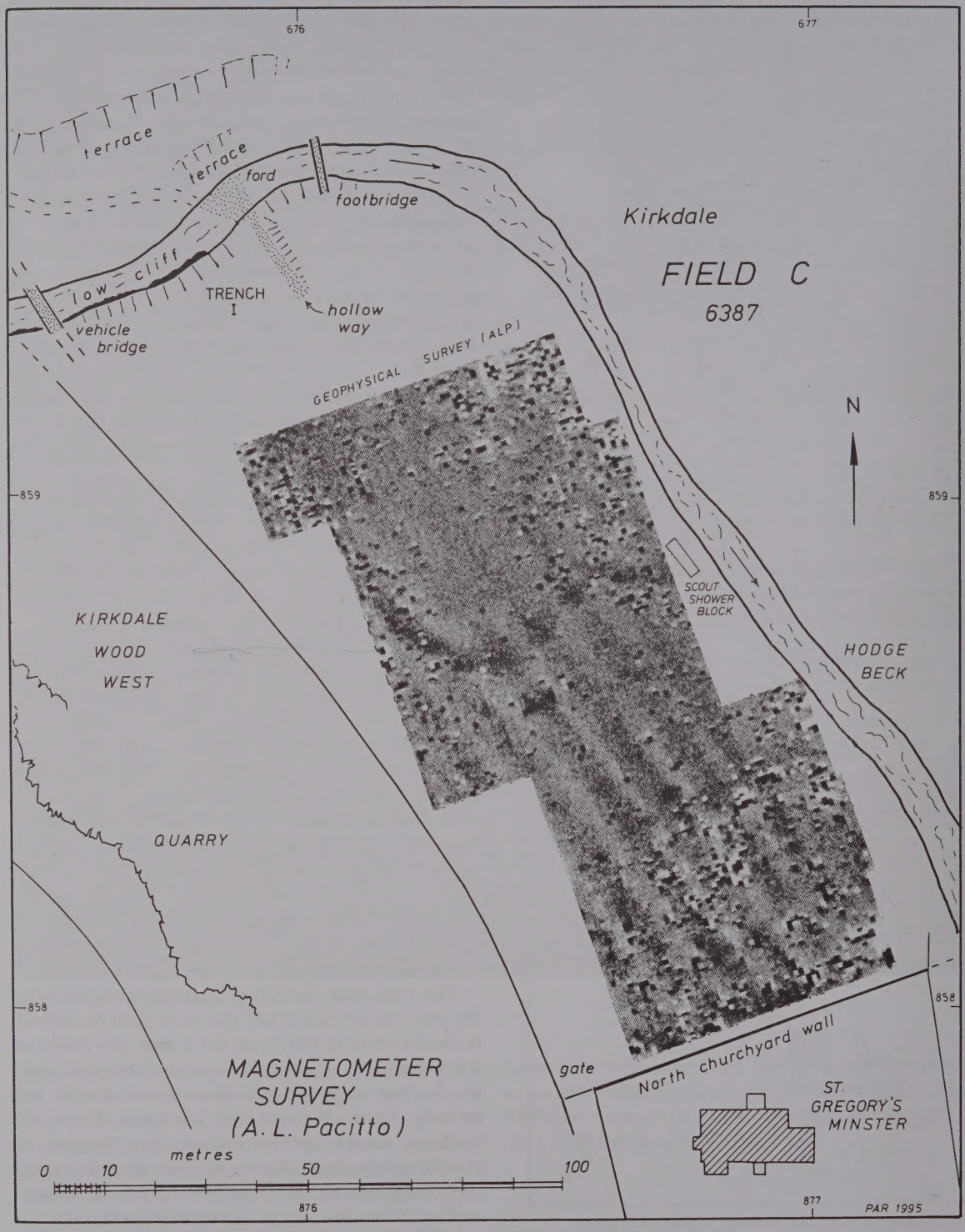

Fig 8 - Field C, magnetometer survey

The ridge and furrow shows up very clearly. The smaller linear features in the southern part (see AAK, fig 3) may be no more than chance alignments of ferrous objects. The most interesting discovery was the large linear feature some 90m north of the churchyard (AAK, fig 3, ALP 1). This crosses almost the entire width of the valley floor, leaving the east side at a point opposite the foundations of the old scout shower block. It runs west for about c 20m, then swings sharply SW for a further 25m before curving northwards and fading out. It has every appearance of being a ditch about 3m wide, cut by the medieval furrows.

The ridge and furrow pattern shows clearly in surface relief over the whole field, but disappears from the magnetic plot to the north of the possible ditch. This suggests a change in soil conditions coinciding well with the line of the ditch. The area to the north is somewhat lower; this will be clearer when a close contour survey has been done. It seems likely that the ditch delimits an area of occupation to its south, the area to the north perhaps being formerly prone to flooding.

In the postulated occupation area there are two distinct discrete anomalies. The southernmost (AAK, fig 3, ALP 4) is about 4 x 3m; this may be a pit, earlier than the ridge and furrow. The more northerly (AAK, fig 3, ALP 3) is larger and more complex, c 6 x 5m and probably a metre or so deep. There are high magnetic spots within it; the fill is unlikely to be the comparatively homogeneous filling of a rubbish pit, but rather a mixed material with some highly magnetic components. These may be due to the inclusion of burnt material, or burning *in situ*.

In a monastic setting, the possible ditch could be seen as a northern boundary of at least one element of the monastic complex, perhaps also doubling as an element in flood protection. Activity at the southern end of the occupation area has been confirmed by the excavation of Trench II. The presence here of industrial and craft debris, notably from iron smelting and smithing, provides a possible function for the two discrete anomalies. Dr McDonnell suggests (see above) that smelting was taking place in the vicinity; the noxious fumes from this activity are likely to be at some distance from secular living areas, or those associated, with religious worship".

The west end of the church

Excavation at the west end of St Gregory's Minster extended and deepened the cutting north of the tower (ST; AAK, 16-17) and opened a larger area south of the tower (TP) (fig 9).

It was possible in these cuttings to define a positive sequence comparable to that in Trench II. Before describing this, we should warn readers that our earlier interpretation in ST of a structure west of the church (AAK, 17) was quite mistaken!

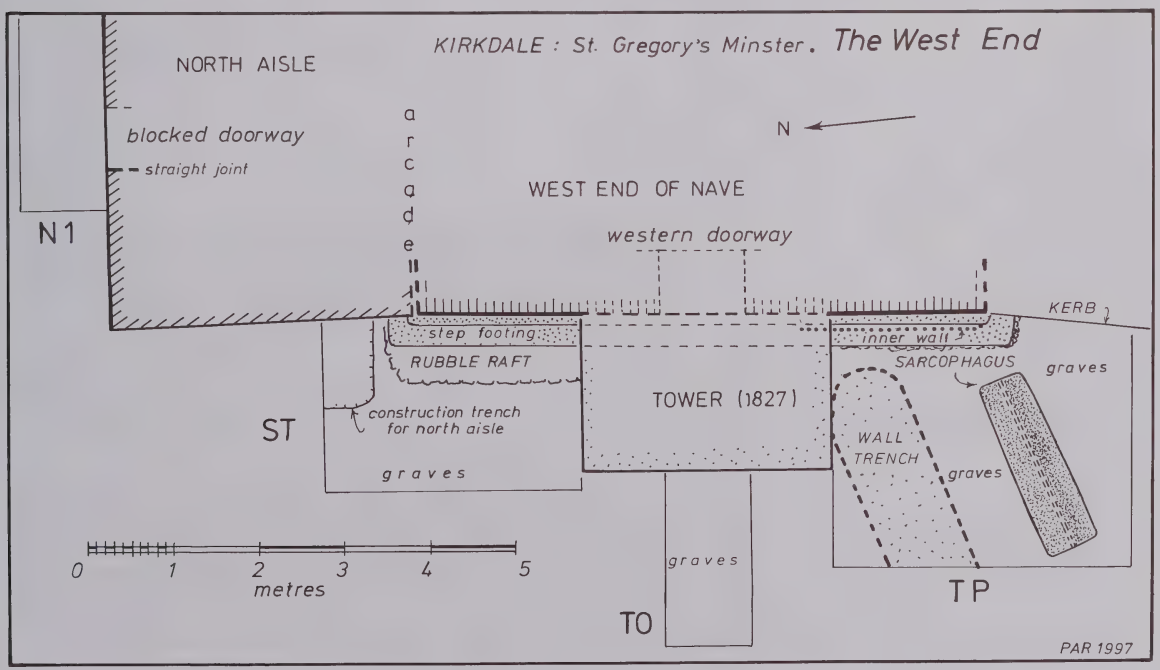

Fig 9 - The west end, plan

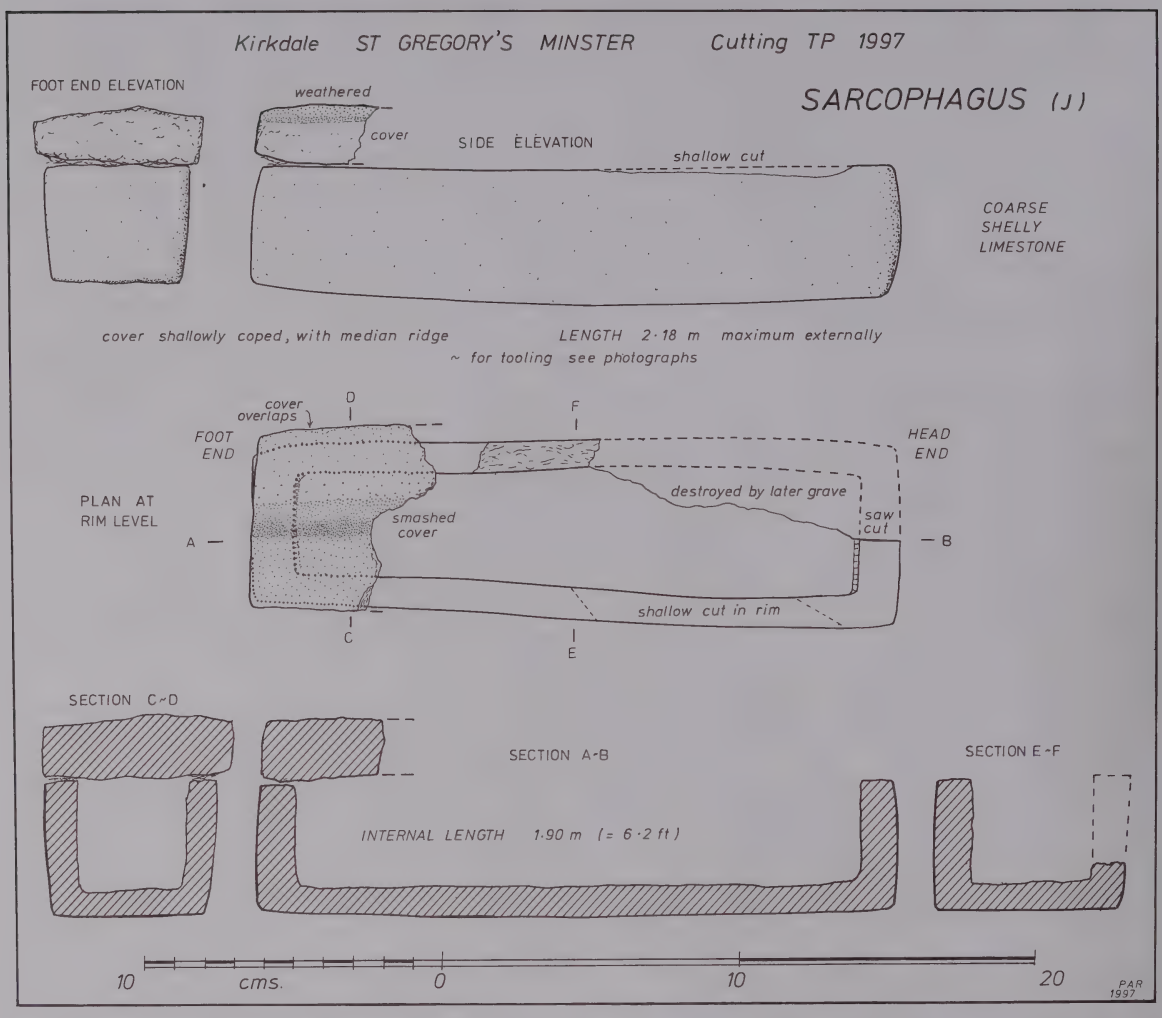

Fig 10 - Sarcophagus, elevations, plan and sections

The first features here were, not surprisingly, early graves, including an adult female in a wooden coffin and stone edging. Secondary to these was a robbed-out wall-trench at an angle to the church - a major addition to the plan of Kirkdale - and an elegant sarcophagus of coarse local limestone (figs 10-11).The latter was smashed on its south side by a later grave; most of its cover had been broken and removed. The original inhabitant, who must have been someone of very high status - monastic or secular - had long since disappeared, replaced by post medieval jumbled charnel.

Fig 11 - Sarcophagus, after removal

Anglo-Saxon sarcophagi are rare, in contrast to numerous Roman and medieval examples. Early ones, such as those at Wirksworth and Derby (St Alkmund), tend to be bath-shaped, with rounded ends and curving sides.The Kirkdale example is slightly bow-sided in plan, and convex in section. It did have, however, a coped cover, with a median ridge, characteristic of 11th - century grave covers at Wharram Percy. We would provisionally date the sarcophagus to the 10th century, perhaps originally made for an important Anglo-Scandinavian.The sarcophagus, weighing about a tonne, was lifted out by a machine (fig 12) under the careful

Fig 12 - The lifting of the sarcophagus

direction of Maurice Kendall and his team; it has been moved to the under-cover location of the stable to protect it from frost. It can be viewed through the slatted wall at the end nearest to the ford. Contemporary with the interment of the sarcophagus were deposits of hundreds of human bones of several individuals. They are unlikely to have all been disturbed by the insertion of the sarcophagus. Some at least may have been kept somewhere else, and been especially placed here (see

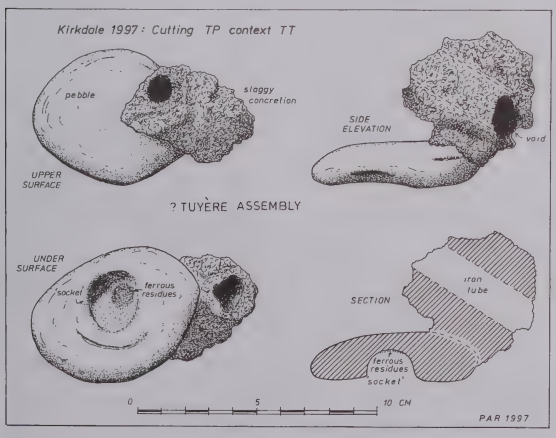

Fig 13 - ?Tuyere assembly

Fig 14 - Charnel pit by sarcophagus

below).Those under the sarcophagus were in very good condition. Among them, for reasons which cannot be guessed at, was another remarkable find, a pebble with a

Fig 15 - Charnel pit, closer view

mass of slaggy material attached at an angle, at the core of which was an iron tube (fig 13). On the lower side of the pebble was an angular hole at a similar angle, with ferrous residues at its base.

We interpret this complex object as including a tuyere:

a nozzle set in the side of a furnace, attached to a bellows on the exterior, and directing a blast of oxygen-rich air into the filling of a furnace - for non-ferrous or ferrous smelting or smithing (or even glass working ?). This is a useful addition to the craft evidence from Trench II.The major deposit of charnel was in a pit close to the base of the sarcophagus (figs 14-15). Among this material were the principal bones of three individuals; their three *crania* were set in a 'nest' at the west end of the pit, laying on their *maxillae* (the upper dentition), facing east (towards the altar?) (fig 16). From the charnel, they were re-united with their mandibles (the lower jaws) (fig 17). Professor Don Brothwell (University of York) identifies them as an adult female (on the left) and two adult males: in his view they are in remarkable state of preservation; as if they had either been not long deceased when exhumed, or had been curated elsewhere.

Finally the lower part of the west wall of the nave was shown to be founded on a two-stepped foundation of large blocks (possibly in two sub-phases on the north

Fig 16 - Skulls in charnel pit, facing east

side), as in AAK, fig 18, the lower being *worn* (re-used?) sandstone blocks; the lower step in both areas, north and south of the tower, was covered with a builders' mortar slick, extending onto material below (hence our over-

Fig 17 - Skulls reconstructed

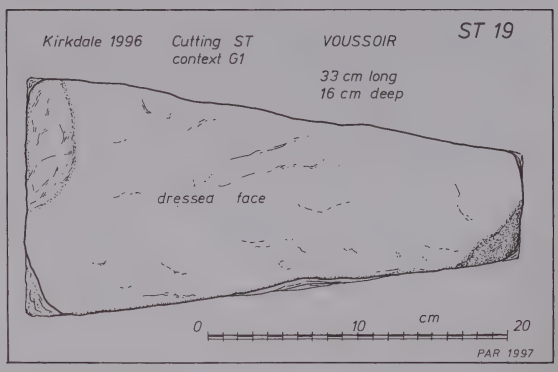

Fig 18 - Voussoir

hasty interpretation in AAK,16-17!).

On the north side of the tower (cutting ST), the underlying material was a massive rubble raft extending down to the natural clay (fig 9) (deeper than shown in AAK, fig 18); in this were roughly dressed blocks from an earlier structure, including a voussoir (fig 18) probably from a window-arch (fig 19); and half of a monolithic window-head, like those at Hovingham (fig 20).

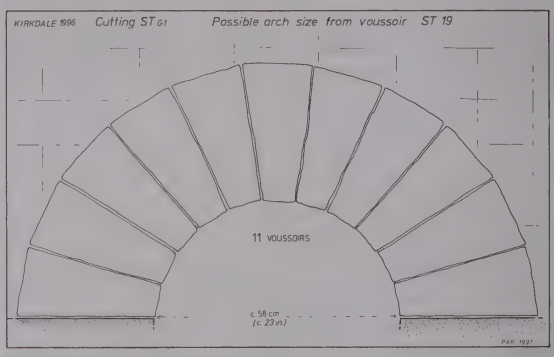

Fig 19 - Reconstruction of arch from voussoir

On the south side of the tower (cutting TP) (fig 9), however, there were only a few irregular stones set under the two-step foundation, not projecting much beyond it, but spreading the load slightly. Incisions made below this, to determine the inner depth of this, located an *inner wall* mortared and deeply founded, set back 20cm, and turning south under the SW corner of the church. Cutting ST on the north side of the tower was later partially re-examined to make sure that this inner wall did not exist north of the tower; it was quite absent. There is thus a major, and so far unexplained, difference between the west end north of the tower, and that to the south. The change lies beneath the tower!

We thus have at least three phases of stone construction at the west end (fig 9); the robbed-out wall-trench, at an angle to the church, and two phases of wall beneath the present west end.

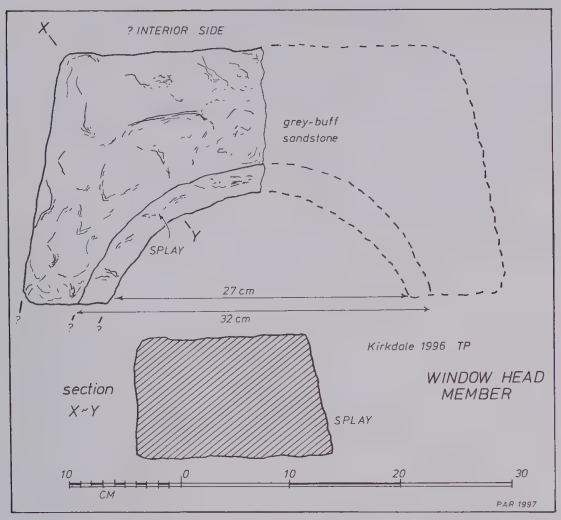

Fig 20 - Monolithic window-head

The ?Priest's House

The final discovery of 1997 was the east end of a substantial building set against the north churchyard wall, opposite Trench II on the inside of the wall. It appears to be of late or post-medieval date, and is probably a priest's house (fig 21). In the destruction debris were a pair of remarkable lead objects (fig 22). Each is in the form of an envelope slit lengthways, with three copper rivets. These secured some fibrous weave, of which residues are visible in the slightly-parted opening of the 'envelope'. While no precise parallel has yet been found, we believe that they were weights (each weighs about a kilogram) attached to the lower border of a hanging (a screen or arras), to keep it taut; made of hessian or similar material.

Fig 21 - ?Priest's house

Conclusion

An important general realisation is that there are two major orientations at Kirkdale (fig 23). The earlier, which we may associate with the Anglo-Saxon monastery, is a 'natural' one, broadly at right-angles to the dale and Hodge Beck (AAK, fig 2). This is represented by the graves and timber structure in Trench II, and by the north churchyard wall and ?priest's house; and by most of the graves at the west end south of the tower, the robbed-out wall, and the sarcophagus. The later orientation (c20° different) is more nearly on the canonical east-west orientation of the present church (including the earlier inner wall).

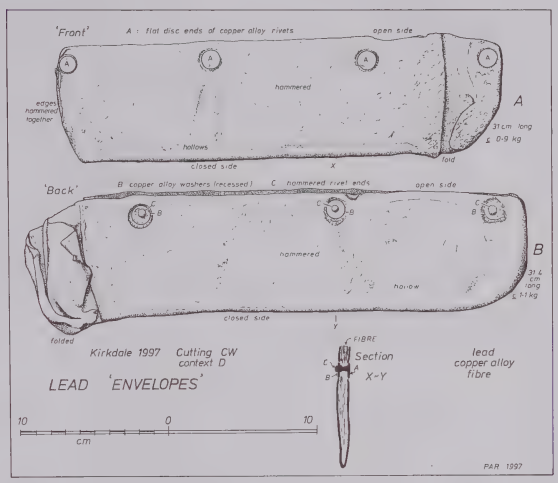

Fig 22 - Lead 'envelope'

As always in archaeology, each new cutting solves some problems, and creates others. The church and its environs have been through many changes in some thirteen centuries; archaeology can throw light on at least some of these, as recent work has shown.

Sculpture

Further excavation is planned on the north side of the church. In the upper levels of an unfinished cutting here (NI) was a fine piece of an Anglian cross-head (fig 24); another piece of interlace sculpture (fig 25) was revealed when the heating chamber on the north side was cleared of its hardware. A further decorated stone was noted in the exterior end of the east wall of the porch (fig 26, restored in fig 27). The cross was originally in low relief, but has been hacked back to be flush with the surface of the rest of the block. This may have

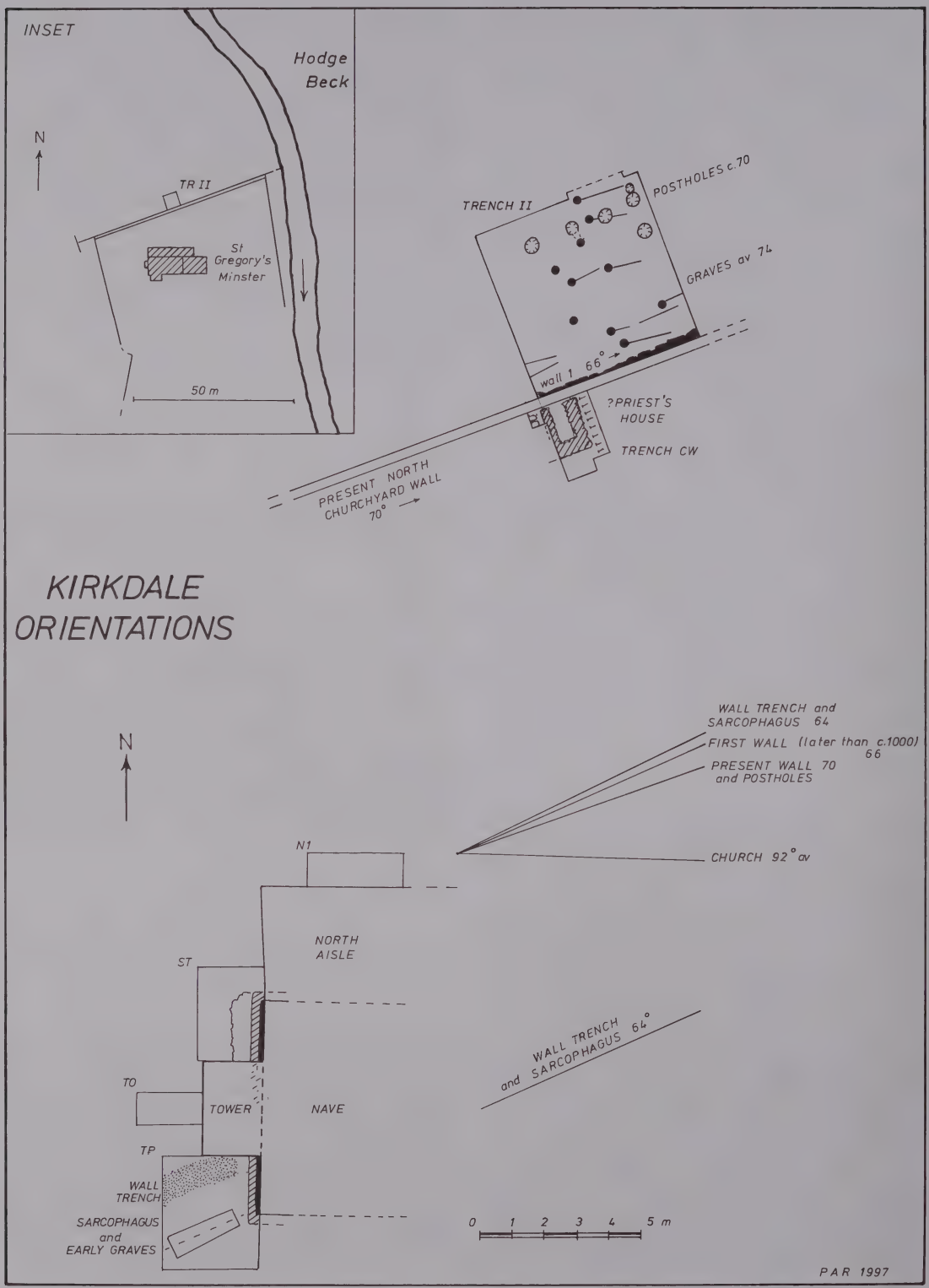

Fig 23 - Kirkdale orientations

originally been an architectural decorative feature, similar to the external Anglo-Saxon crosses visible at Hovingham and Middleton.

Public Relations

The work at Kirkdale has become something of a focus for public interest in archaeology in Ryedale. It has been a source of intellectual and spiritual stimulation to the Christian community at St Gregory's Minster, and has attracted many visitors from local towns and villages, and from further afield. Lectures have been given in the church, and at Helmsley, Nunnington, Pocklington and York. Of the last-named one was to the York Archaeological and Architectural Society, and the other was to the first conference of the newly-formed Society for Church Archaeology; there has also been a seminar at the Department of Archaeology at the Kings Manor complex of the University of York. We have also had group visits from the Royal Archaeological Institute, Hendon Archaeological Society, the Helmsley

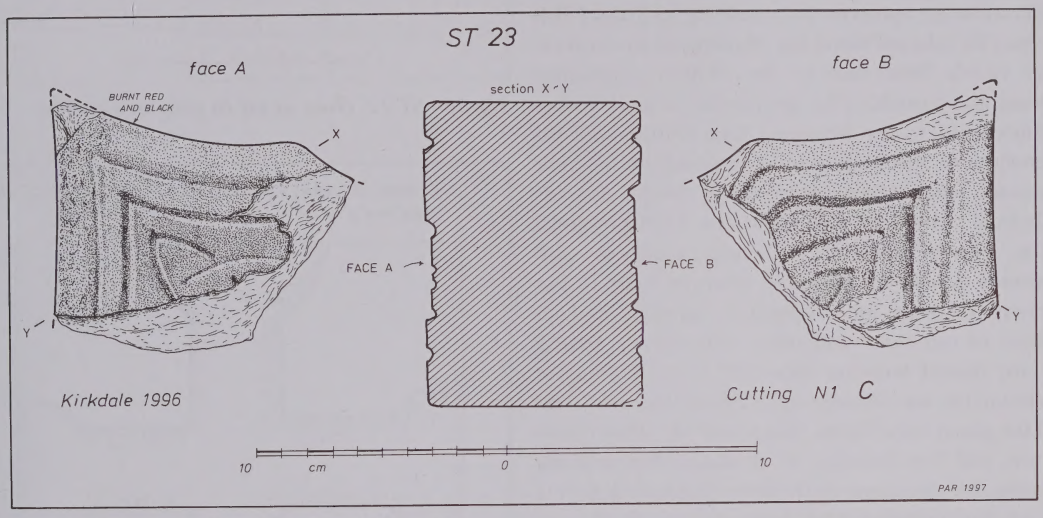

Fig 24 - ST 23, Anglian cross-head fragment

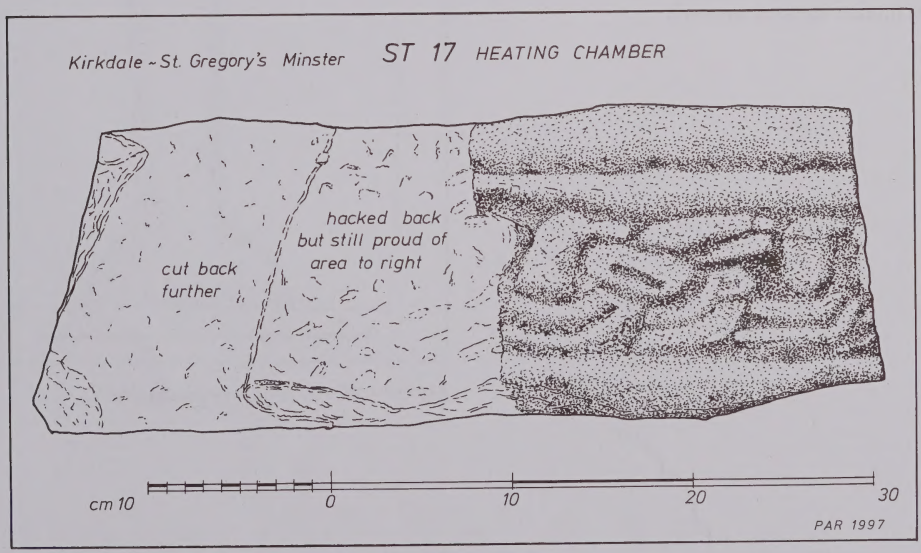

Fig 25 - ST 17, Sculpture fragment in heating chamber

Archaeological Society, the Council for British Archaeology staff, the Sachsen-Symposium and the Viking Congress. The last two included scholars from France, Germany, Spain, Russia, Denmark, Norway and Sweden, as part of excursions from conferences in York. Finally, the lead inscribed plate was exhibited to the Society of Antiquaries in London.

Acknowledgements

We acknowledge again our indebtedness to Major J H R Shaw and Mr Edward Wood for allowing us to excavate in the North Field; and to the church authorities (diocesan and parochial) for permission to work within the churchyard; to the Reverend John Warden and his churchwardens Sue Doktor and Peter Addison for their enthusiastic encouragement; to Tony Pacitto for his geophysical work; to the Helmsley Archaeological Society, North Yorkshire County Council, and anonymous donors for generous financial help; to the University of York for continuing support, and to members of our team and other volunteers. Among these we should mention especially Carol Colbourne (who found the lead inscription), Debbie Haycock (who found the glass), Anne Taylor, Madge and Jon Allison, Basil Wharton, and Tom Fawcett, all of whom dug in some uncomfortable situations; to Dr Gerry McDonnell for his work on the metal-working residues; and finally our thanks to Professor Don Brothwell and his graduate students, of the University of York, who have begun a study of the human skeletal material.

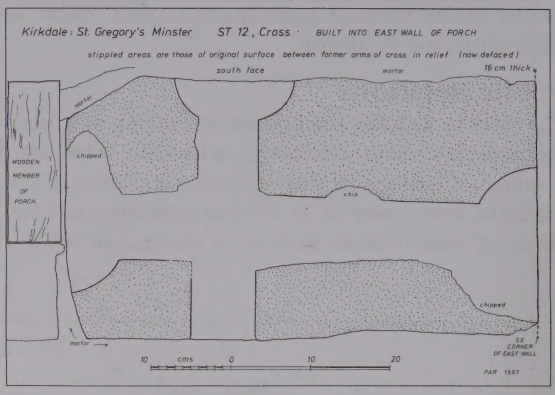

Fig 26 - ST 12, cross as set in present location

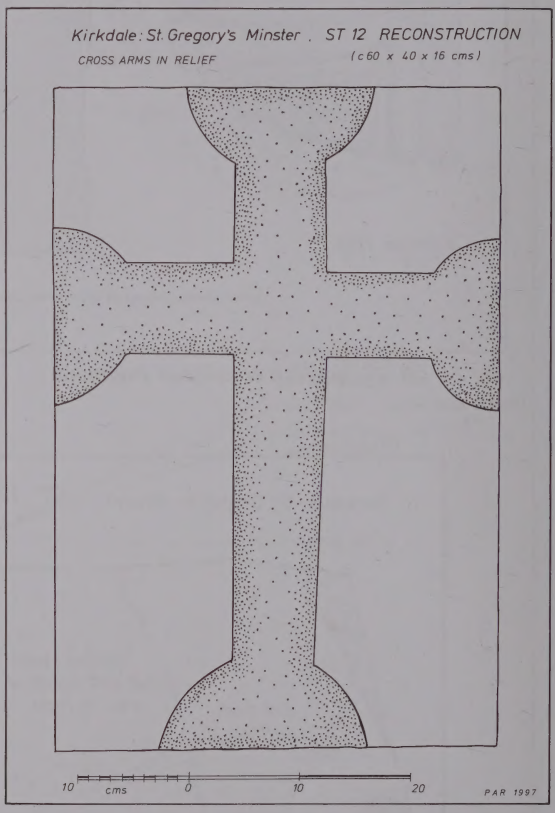

Fig 27 - ST 12, cross reconstructed

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